AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound;

analyzing expression of a polypeptide having at least 90% sequence identity to a polypeptide encoded by SEQ ID NO:1 or 2; and

analyzing mitochondrial membrane potential,

wherein a change in expression of the polypeptide indicates that the compound affects uncoupling.

2-26. (canceled)

27. (currently amended) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1 or 2.

28. (previously added) The method of claim 1, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

29. (currently amended) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

30. (currently amended) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

31. (currently amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1 or 2.

32. (currently amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

33. (currently amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

34. (currently amended) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

35. (currently amended) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

36. (currently amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

37. (currently amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

38. (previously added) The method of claim 1, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

39. (currently amended) The method of claim 1, wherein the polypeptide is encoded by SEQ ID NO:1.

40. (currently amended) The method of claim 1, wherein the polypeptide is encoded by SEQ ID NO:2.

41. (currently amended) A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound; and

analyzing expression of a polypeptide encoded by SEQ ID NO:1 or 2, ~~and having uncoupling activity within the sample,~~

wherein a change in expression of the polypeptide indicates that the compound affects uncoupling.

42. (canceled)

43. (previously added) The method of claim 41, further comprising analyzing mitochondrial membrane potential in the sample.

44. (currently amended) A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound suspected of affecting uncoupling; and

analyzing expression of a polypeptide having at least 90% sequence identity to a polypeptide encoded by SEQ ID NO:1 or 2,

wherein a change in expression of the polypeptide indicates that the compound affects uncoupling.

45. (currently amended) The method of claim 44, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1 or 2.

46. (previously added) The method of claim 44, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

47. (currently amended) The method of claim 44, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

48. (currently amended) The method of claim 44, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

49. (currently amended) The method of claim 46, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1 or 2.

50. (currently amended) The method of claim 46, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

51. (currently amended) The method of claim 46, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

52. (currently amended) The method of claim 44, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

53. (currently amended) The method of claim 44, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

54. (currently amended) The method of claim 46, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

55. (currently amended) The method of claim 46, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

56. (previously added) The method of claim 44, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

57. (currently amended) The method of claim 44, wherein the polypeptide is encoded by SEQ ID NO:1.

58. (currently amended) The method of claim 44, wherein the polypeptide is encoded by SEQ ID NO:2.

59. (currently amended) A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound;

analyzing expression of a polypeptide having at least 90% sequence identity to a polypeptide encoded by SEQ ID NO:1 or 2; and

analyzing effect of the compound on mitochondrial membrane potential,

wherein a change in expression of the polypeptide indicates that the compound affects uncoupling.

60. (currently amended) The method of claim 59, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1 or 2.

61. (previously added) The method of claim 59, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

62. (currently amended) The method of claim 59, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

63. (currently amended) The method of claim 59, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

64. (currently amended) The method of claim 61, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1 or 2.

65. (currently amended) The method of claim 61, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

66. (currently amended) The method of claim 61, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 90% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

67. (currently amended) The method of claim 59, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

68. (currently amended) The method of claim 59, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

69. (currently amended) The method of claim 61, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:1.

70. (currently amended) The method of claim 61, wherein the analyzing of expression of the polypeptide comprises analyzing ~~the~~ expression of a polypeptide having at least 95% amino acid sequence identity to the ~~protein~~ polypeptide encoded by SEQ ID NO:2.

71. (previously added) The method of claim 59, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

72. (currently amended) The method of claim 59, wherein the polypeptide is encoded by SEQ ID NO:1.

73. (currently amended) The method of claim 59, wherein the polypeptide is encoded by SEQ ID NO:2.